

## Wisconsin Department of Natural Resources SWIMS Project Summary

### General Project Information

**Project ID:** ACEI-084-10

**Name:** UNIVERSITY OF WISCONSIN-MADISON: Whole Lake Mixing to Remove Invasive Rainbow Smelt from Wisconsin

**Type:** Aquatic Invasives Grant

**Subtype:** Aquatic Invasives Research Grant

**Status:** COMPLETE

**Start Date:** 4/1/2010

**End Date:** 6/30/2014

**Purpose:** UW-Madison Center for Limnology is sponsoring an ACEI Research and Demonstration grant to study Crystal Lake, in Vilas County. The project will focus on mixing Crystal Lake to remove smelt and restore the ecosystem that existed prior to smelt invasion. If successful, this project will be used as a model to apply to other smelt removal projects.

Project activities include: 1) Build Gradual Entrainment Lake Inverters (GELI\2019s) and mixing system; 2) Hire three undergraduates each summer; 3) Mix Crystal Lake for three summers (2011-2013); 4) Monitor physical and chemical limnology weekly and every ten minutes (with automated sensor networks); 5) Monitor fish community every 2 weeks, benthos every month, and zooplankton every week; 6) public education and outreach \2013 build an exhibit for Crystal Lake Nature Center, lead 2 interpretive Naturalist sessions, news releases, website updates, workshops, WAL Lakes Convention presentation, and K-12 educational events; 7) Annual summaries and a final report.

Project deliverables include: 1) Mixing system; 2) Hired students; 3) Limnological, fish, benthos, and zooplankton monitoring data; 4) Potential extirpation of rainbow smelt; 5) Public education and outreach \2013 informational materials, presentations, media outreach, web-based materials, K-12 education, and undergraduate education; 6) Annual summaries and final report.

Specific conditions for this project: Annual summaries and final report needs Dept review and approval.

WDNR Lakes Management Coordinator will be provided with an electronic (pdf or word) and hard copy of annual summaries, final report, all education and outreach materials, and all data and maps from project.

**Objective:**

**Comments:** Grantee is UNIVERSITY OF WISCONSIN-MADISON

**Outcome:**

**Study Design:**

**QA Measures:**

### People

Name	Role	Status	Start Date	End Date	Organization	Comments
UW-MADISON,	GRANT_RECIPIENT	COMPLETE	4/1/2010	6/30/2014	UW-MADISON	

### Project Statuses

Date	Reported By	Status	Comments
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### Actions

Action	Detailed Description	Start Date	End Date	Status
Control Invasive Species	35021349	4/1/2010		PROPOSED
Aquatic Invasives Research	35021349	4/1/2010		PROPOSED
Grant Awarded	ACEI-084-10	4/1/2010	6/30/2014	COMPLETE

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Information and Education		4/1/2010	6/30/2014	PROPOSED
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### Monitoring Stations

Station ID	Name	Comments
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### Assessment Units

WBIC	Segment	Local Name	Official Name
1842400	1	Crystal Lake (T41n R07e S27)	Crystal Lake

### Lab Account Codes

Account Code	Description	Start Date	End Date
AS008	AQUATIC INVASIVE SPECIES (PLANNING GRANT)	1/1/1960	12/31/2099
AS009	AQUATIC INVASIVE SPECIES (PLANNING GRANT)	1/1/1960	12/31/2099
AS010	AQUATIC INVASIVE SPECIES (PLANNING GRANT)	1/1/1960	12/31/2099

### Forms

Form Code	Form Name
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### Methods

Method Code	Method Description
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### Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
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### Documents

Title	Description	Author	Published	Comments
Experimental mixing of a north-temperate lake: testing the thermal limits of non-native rainbow smelt, a cold-water fish	Factsheet for research on whole-lake mixing as a control method for non-native rainbow smelt.	AIS Research Team	10/1/2020	

### Budget

#### Combined Budgets:

Combined WSLH:

Combined Total: \$0.00

### Funding

Organization	Source	Type	Amount	Start Date	End Date
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8/28/2024

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